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PATENT No. 7,286,538 B2

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

PATENTEE(S) : Jae-Yoon Song et al.  
PATENT NO. : US 7,286,538 B2  
ISSUED : October 23, 2007  
FOR : METHOD FOR CHECKING MULTICAST LLID TRANSMISSION IN  
ETHERNET PASSIVE OPTICAL NETWORK

Certificate of Mailing Under 37 CFR 1.8

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Steve Cha, Reg. No. 44,069  
(Name of Registered Rep.)

 10/26/07  
(Signature and Date)

REQUEST FOR CERTIFICATE OF CORRECTION  
UNDER 37 CFR 1.323

Attention Certificate of Corrections Branch  
Commissioner For Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

*Certificate  
NOV 01 2007  
of Correction*

Dear Sir:

In accordance with the provisions of 37 CFR 1.323, the Patent and Trademark Office is respectfully requested to issue a Certificate of Correction in the above-identified Patent to correct an error in the Assignee's address on the face of the Patent (Item 73). The Assignee's address should read

-- Gyeonggi-Do --

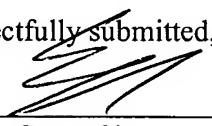
as shown on the Issue Fee Transmittal filed on September 14, 2007, copy enclosed.

*Nov 1 2007*

As these mistakes were the fault of the Patent and Trademark Office, it is believed to be in order for the Patent and Trademark Office to issue a Certificate of Correction and to place such Certificate in the file, so that such will appear on any copies of the Patent which are ordered in the future. Moreover, since these mistakes are that of the Patent and Trademark Office, such should be done without charge.

Two (2) copies of Form PTO/SB/44 embodying the requested correction accompany this letter. Return of one copy of the Form duly certified is requested.

Respectfully submitted,

  
By: Steve Cha  
Attorney for Applicant  
Registration No. 44,069

Date: October 26, 2007

Enclosure: Copy of Issue Fee Transmittal filed on September 14, 2007  
Form PTO/SB/44

**Mail all correspondence to:**

Steve S. Cha, Reg. No. 44,069  
CHA & REITER, LLC  
210 Route 4 East, Suite #103  
Paramus, NJ 07652  
Telephone: 201-226-9245  
Fax: 201-226-9246

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**UNITED STATES PATENT AND TRADEMARK OFFICE**  
**CERTIFICATE OF CORRECTION**Page 1 of 1

PATENT NO. : 7,286,538 B2

APPLICATION NO.: 10/659,158

ISSUE DATE : October 23, 2007

INVENTOR(S) : Jae-Yoon Song et al.

It is certified that an error appears or errors appear in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

Title Page

Item [73], Assignee's address, should read as follows:

--Gyeonggi-Do.--

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## UNITED STATES PATENT AND TRADEMARK OFFICE CERTIFICATE OF CORRECTION

Page 1 of 1

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**United States Patent**  
Song et al.

(10) Patent No.: **US 7,286,538 B2**  
(45) Date of Patent: **Oct. 23, 2007**

**(54) METHOD FOR CHECKING MULTICAST LLID TRANSMISSION IN ETHERNET PASSIVE OPTICAL NETWORK**

**(75) Inventors:** Jae-Yoon Song, Songnam-shi (KR); Jin-Hee Kim, Suwon-shi (KR); A-Jung Kim, Seoul (KR); Min-Hyo Lee, Suwon-shi (KR); Se-Youn Lim, Seoul (KR); Su-Hyung Kim, Seoul (KR); Jong-Ho Yoon, Koyang-shi (KR)

**(73) Assignee:** Samsung Electronics Co., Ltd., Suwon-Si [Gyeonggi-Do]

(\* ) **Notice:** Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 943 days.

**(21) Appl. No.: 10/659,158**

**(22) Filed:** Sep. 10, 2003

**(65) Prior Publication Data**

US 2004/0057431 A1 Mar. 25, 2004

**(30) Foreign Application Priority Data**

Sep. 19, 2002 (KR) ..... 10-2002-0057297

**(51) Int. Cl.** H04J 3/26 (2006.01)

**(52) U.S. Cl.** ..... 370/392; 370/432

**(58) Field of Classification Search** ..... 370/390, 370/392, 432, 475

See application file for complete search history.

**(56) References Cited**

**U.S. PATENT DOCUMENTS**

6,967,949 B2 *	11/2005	Davis et al. ....	370/390
2003/0152389 A1 *	8/2003	Sala et al. ....	398/98
2005/0135365 A1 *	6/2005	Sung et al. ....	370/390
2006/0039390 A1 *	2/2006	Boyd et al. ....	370/404
2006/0126627 A1 *	6/2006	Diouf .....	370/390

\* cited by examiner

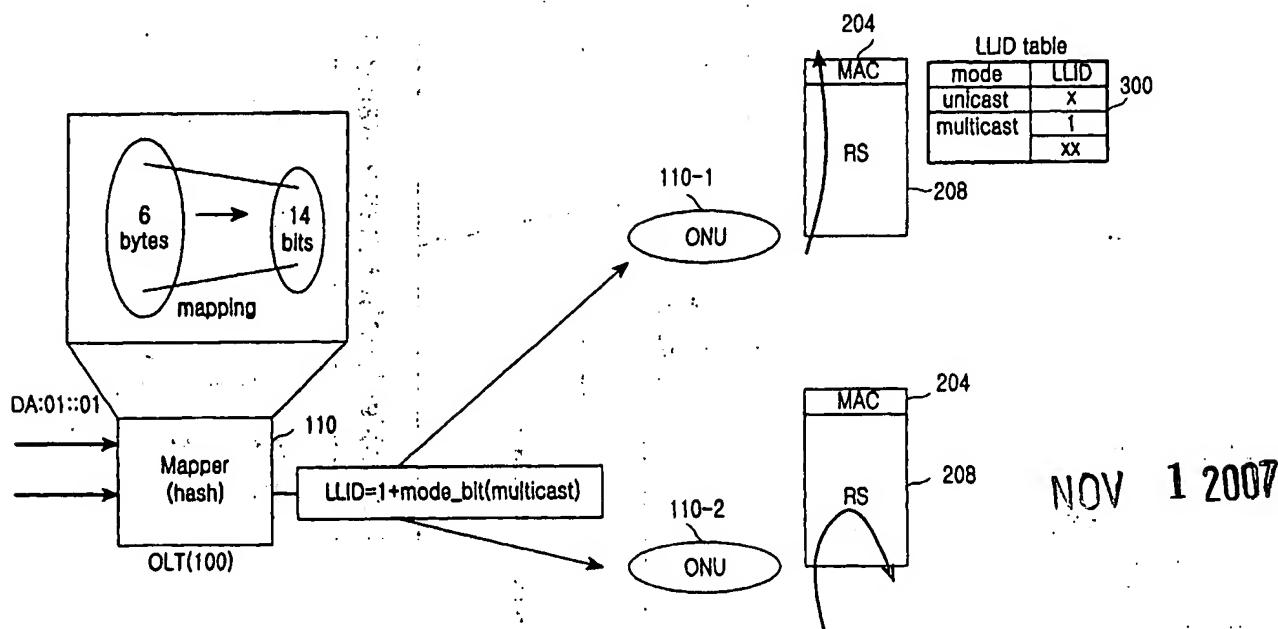
**Primary Examiner**—Melvin Marcelo

**(74) Attorney, Agent, or Firm**—Cha & Reiter, LLC

**(57) ABSTRACT**

A method for checking whether a transmission is a multicast transmission or not is disclosed, which includes in an Ethernet passive optical network including an OLT and multiple ONUs connected to the OLT, checking whether a transmission is a multicast transmission or not by generating a multicast LLID that represents multicast information. Subsequently from a multicast MAC address in a MAC layer in the multiple ONUs or the OLT, so that at least one ONU from among the multiple ONUs or the OLT receives the multicast transmission, the method comprising the steps of: (1) modifying the multicast MAC address and mapping the modified address to a LLID field in a RS layer below the MAC layer; and (2) generating mode information, which represents a multicast transmission, being adjacent to the LLID field and locating the mode information, wherein, the RS layer checks whether a transmission transmitted to the ONU or the OLT is a multicast transmission or not.

8 Claims, 7 Drawing Sheets



**PART B - FEE(S) TRANSMITTAL**

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OCT 29 2007

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<i>STEVE CHA</i>	(Depositor's name)
<i>SC</i>	(Signature)
<i>9-14-07</i>	(Date)

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/659,158	09/10/2003	Jae-Yoon Song	5000-1-470	3734

LE OF INVENTION: METHOD FOR CHECKING MULTICAST LLID TRANSMISSION IN ETHERNET PASSIVE OPTICAL NETWORK

APPLN. TYPE	SMALL ENTITY	ISSUE FEE DUE	PUBLICATION FEE DUE	PREV. PAID ISSUE FEE	TOTAL FEE(S) DUE	DATE DUE
nonprovisional	NO	\$1400	\$300	\$0	\$1700	09/14/2007

EXAMINER	ART UNIT	CLASS-SUBCLASS
MARCELO, MELVIN C	2616	370-392000

Change of correspondence address or indication of "Fee Address" (37 CFR 1.363).

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1 CHA & REITER, LLC

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(B) RESIDENCE: (CITY AND STATE OR COUNTRY)

**46, MAETAN-DONG, YEDONG TONG-GU  
SUWON-SI, GYEONGGI-DO  
KOREA, REPUBLIC OF KOREA**

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Date 9-14-07 NOV 1 2007

Typed or printed name STEVE CHA

Registration No. 44,069

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